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## **Y2O3-doped YBCO Thin Films Prepared by Polymer-Assisted Fluorine-Free Metal Organic Deposition**

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Compared with the traditional TFA-MOD methods, the PAFF-MOD method can significantly eliminate the toxicity of fluoride. In addition, the heat treatment process can be simplified and the heat treatment time can be shortened greatly. In this work, a polymer-assisted fluorine-free metal organic deposition (PAFF-MOD) was used to prepare Y2O3-doped YBCO thin film on CeO2-buffered hastelloy. The morphological features of YBCO films were characterized by FESEM. The crystal structure of YBCO film was determined by XRD and Raman. The surface morphology was investigated by AFM. The relationship between the  $J_c$  of YBCO films and Y2O3 content is studied. The relationship among  $J_c$ , magnetic field and Y2O3 content is carefully studied.

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